

CLAIMS

1 - Electronic tag comprising:

- a memory storing a code consisting of a plurality of ranks,
- a reading means for successively reading code values in the different ranks,
- at least one antenna communicating with a base-station and
- control means adapted to, in response to a read request (120, 210) from a base-station, instruct the reading means to read the code value in at least one rank and to cause a response signal (125, 215) to be sent, in return, via an antenna, and, in response to a write request from a base-station, to modify the code in said memory,

characterized in that the control means are adapted:

- when the tag passes close to a first base-station, to write a value representing the passage close to said first base-station in a pre-defined rank of the code (110) and
- in response to the first read request received from a second base-station (120, 210), to instruct the reading means to read at least said rank of the code whose value represents the passage close to the first base-station and, via said antenna, to cause a signal representing the value read in said rank (125, 215) to be sent.

2 – Electronic tag according to claim 1, characterized in that the control means are adapted to write, when the tag passes close to the first base-station, the value representing the passage close to the first base-station in a rank of the code that is read first by the second base-station during the read request received from said second base-station.

3 – Electronic tag according to either one of claims 1 or 2, characterized in that:

- the control means are adapted to emit, via said antenna, a response signal during a time interval that depends upon the value read by the reading means and
- the value representing the passage close to the first base-station in said pre-defined rank of the code is the value that corresponds, chronologically, to the first time interval for signal emission.

4 - Process of communication between an electronic tag and at least two base-stations, said electronic tag comprising:

- a memory storing a code consisting of a plurality of ranks,
- a reading means for successively reading code values in the different ranks,
- at least one antenna communicating with a base-station and
- control means adapted to, in response to a read request from a base-station (120, 210), instruct the reading means to read the code value in at least one rank and to cause a response signal (125, 215) to be sent, in return, via an antenna, and, in response to a write request from a base-station (105), to modify the code in said memory (110),

characterized in that it comprises:

- when the electronic tag passes close to the first base-station, a step where a value representing the passage close to said first base-station is written in a pre-defined rank of the code (110) and
- when the electronic tag passes close to the second base-station, in response to the first read request received from the second base-station, a step where said tag sends a signal representing at least the value of said code in said rank whose value is representative of the passage close to the first base-station (125, 215).

5 – Process according to claim 4, characterized in that the step of writing comprises, when the electronic tag passes close to the first base-station, writing the value representing the passage close to the first base-station in a rank of the code that is read first by the second base-station during the read request received from said second base-station.

6 – Process according to any one of claims 4 or 5, characterized in that it comprises, in response to requests from the second base-station, a step where a response signal is emitted during a time interval that depends on the value of said code in a rank, the value representing the passage close to the first base-station in said pre-defined rank of the code having the value that corresponds, chronologically, to the first time interval for signal emission.

7 - Base-station, called the "second", for communicating with an electronic tag, said base-station comprising at least one antenna for sending read requests to said tag (210) and receiving from the tag, in response, a signal representing the value in at least one rank of a code (215) stored by said tag, characterized by comprising a means for detecting the absence said tag's passage close to another base-station, called the "first" (220), as a result of the first response emitted by said tag in response to a read request.

8 - Base-station according to claim 7, characterized in that said means of detection is adapted to detect the absence of said tag's passage close to the first base-station when said first response is performed, chronologically, during the first time interval for signal emission.

9 - Base-station according to any one of claims 7 or 8, characterized in that it comprises at least two antenna pairs adapted to generate electromagnetic fields of different geometries and the base-station is adapted to cause signals to be emitted successively by each of said antenna pairs.

10 - Base station according to claim 9, characterized in that it is adapted to order requests to be sent and responses to be received sequentially by antenna pairs of different geometries generating non-coplanar electromagnetic fields.